FIG.1

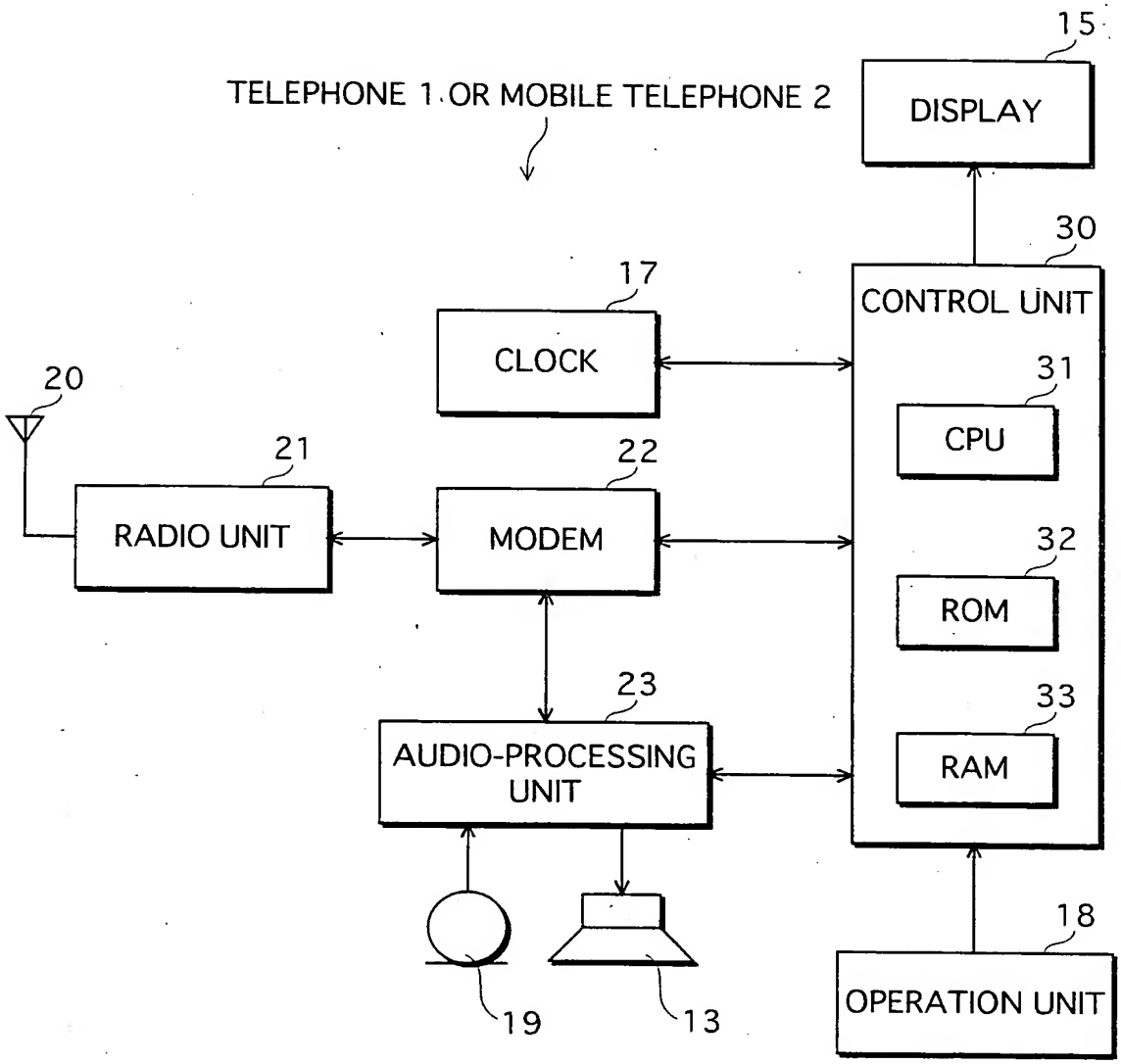

TELEPHONE 1 OR MOBILE TELEPHONE 2
15
DISPLAY
30
CONTROL UNIT
17
CLOCK
31
CPU
20
21
RADIO UNIT
22
MODEM
32
ROM
23
33
AUDIO-PROCESSING UNIT
RAM
18
OPERATION UNIT
19
13

FIG.2

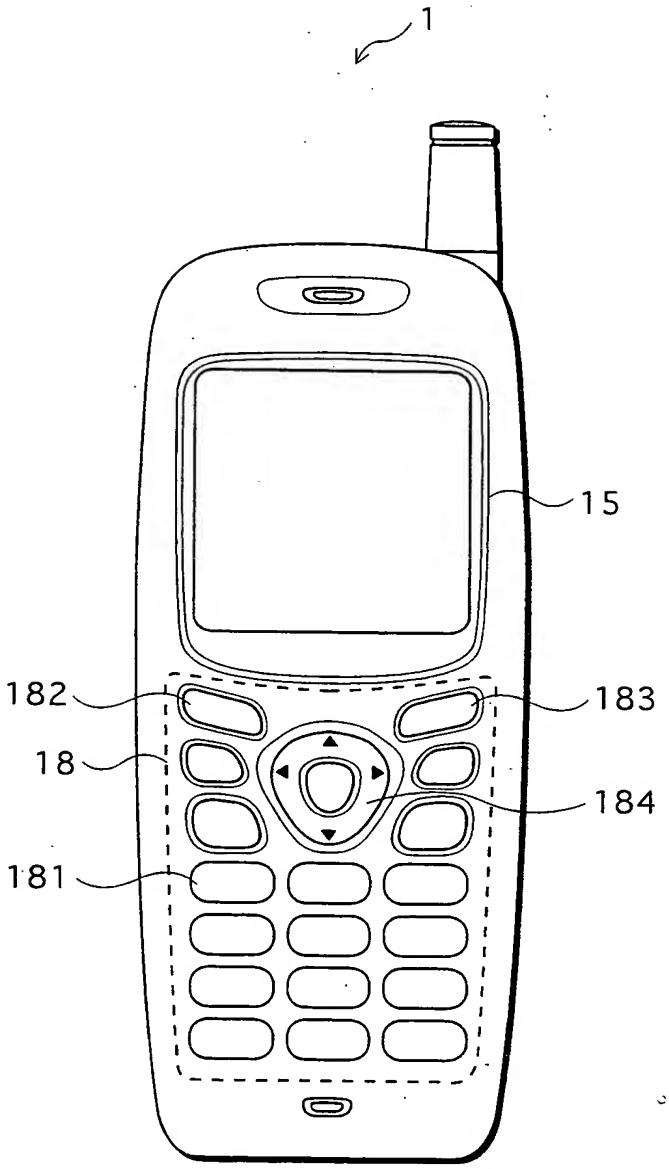


FIG.3

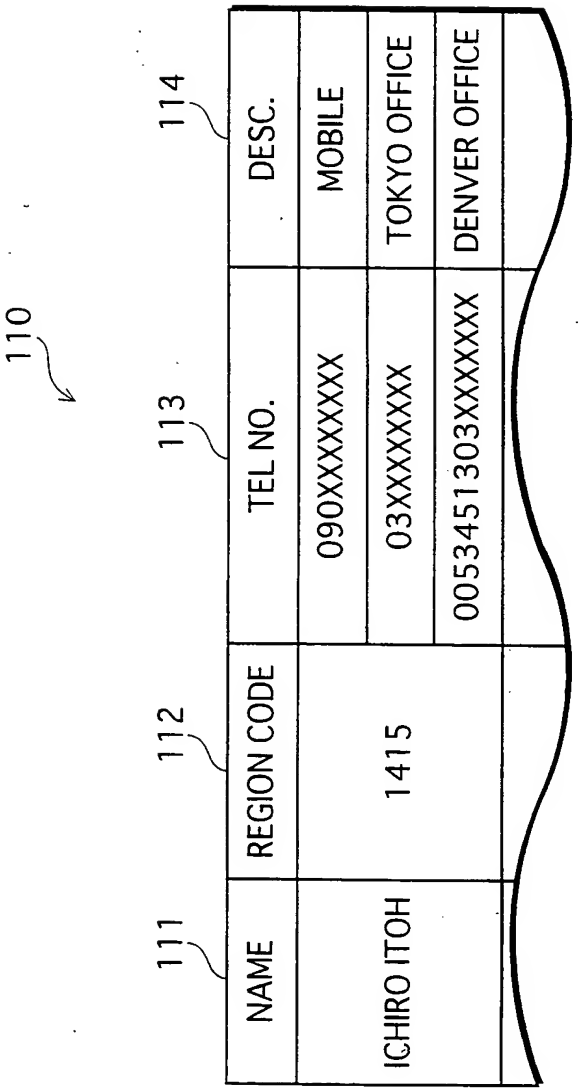

110
111
112
113
114
NAME
REGION CODE
TEL NO.
DESC.
ICHIRO ITOH
1415
090XXXXXXX
MOBILE
03XXXXXXX
TOKYO OFFICE
0053451303XXXXXX
DENVER OFFICE

FIG.4

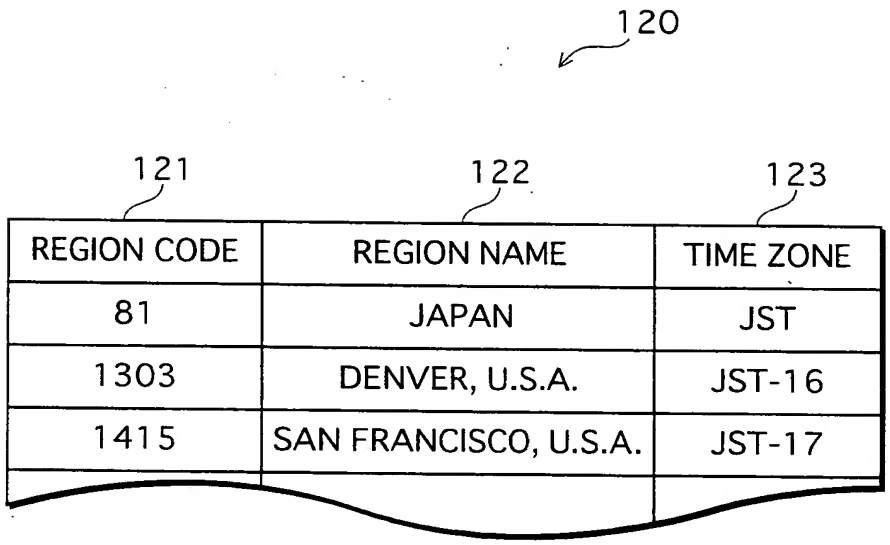

120
121
122
123
REGION CODE
REGION NAME
TIME ZONE
81
JAPAN
JST
1303
DENVER, U.S.A.
JST-16
1415
SAN FRANCISCO, U.S.A.
JST-17

FIG.5

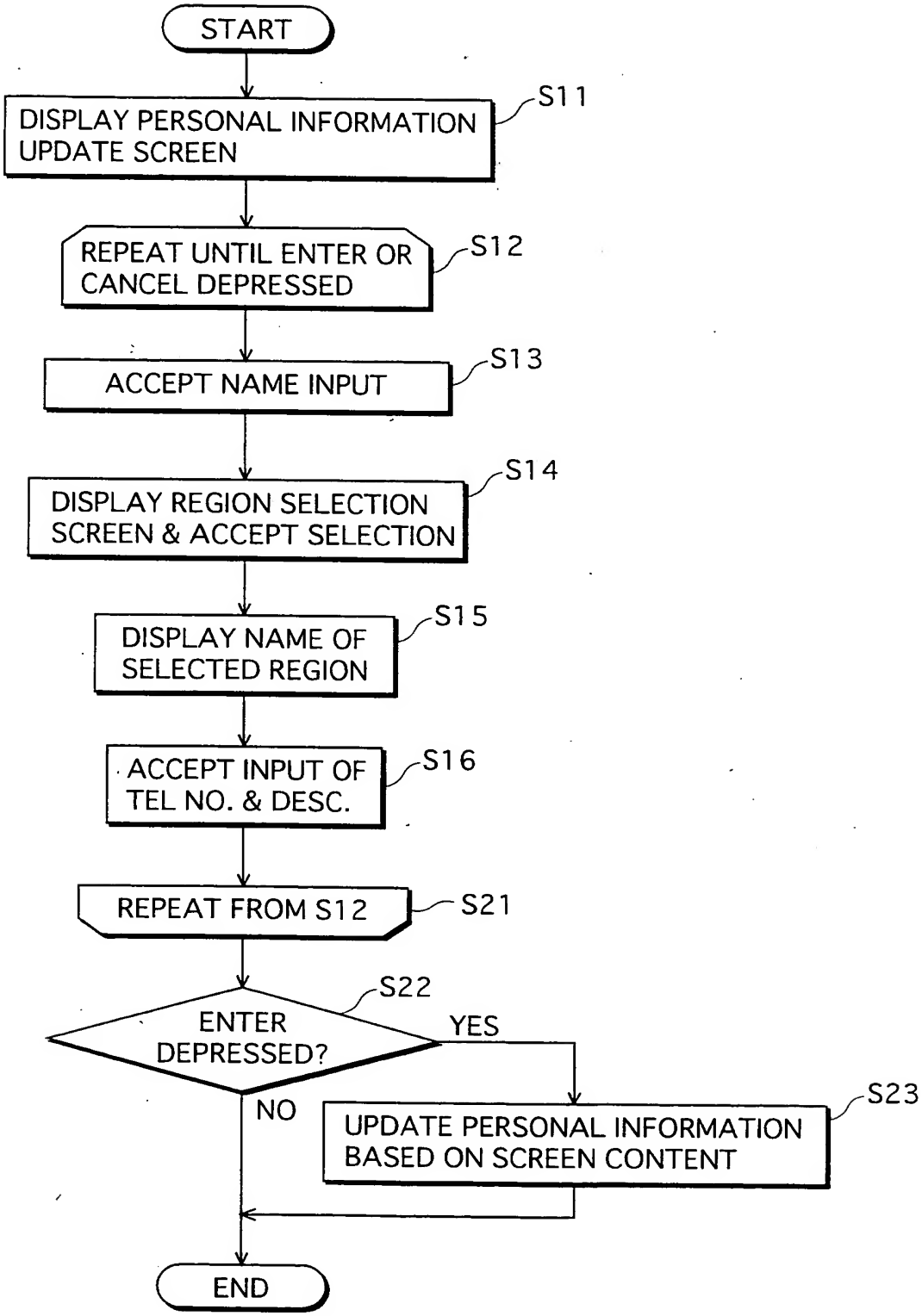

START
DISPLAY PERSONAL INFORMATION UPDATE SCREEN
S11
REPEAT UNTIL ENTER OR CANCEL DEPRESSED
S12
ACCEPT NAME INPUT
S13
DISPLAY REGION SELECTION SCREEN & ACCEPT SELECTION
S14
DISPLAY NAME OF SELECTED REGION
S15
ACCEPT INPUT OF TEL NO. & DESC.
S16
REPEAT FROM S12
S21
ENTER DEPRESSED?
S22
YES
NO
UPDATE PERSONAL INFORMATION BASED ON SCREEN CONTENT
S23
END

FIG.6

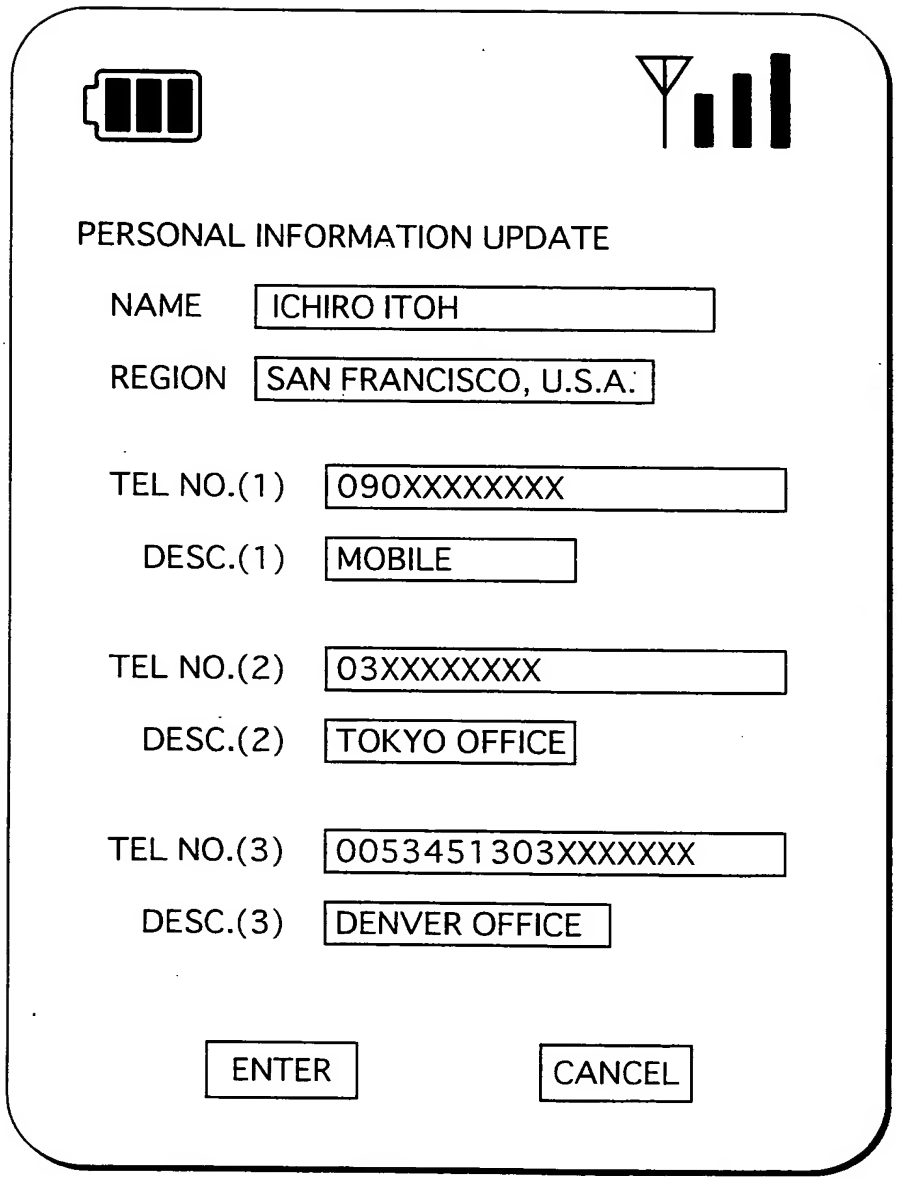

PERSONAL INFORMATION UPDATE
NAME
ICHIRO ITOH
REGION
SAN FRANCISCO, U.S.A.
TEL NO.(1)
090XXXXXXXX
DESC.(1)
MOBILE
TEL NO.(2)
03XXXXXXXX
DESC.(2)
TOKYO OFFICE
TEL NO.(3)
0053451303XXXXXXX
DESC.(3)
DENVER OFFICE
ENTER
CANCEL

FIG.7

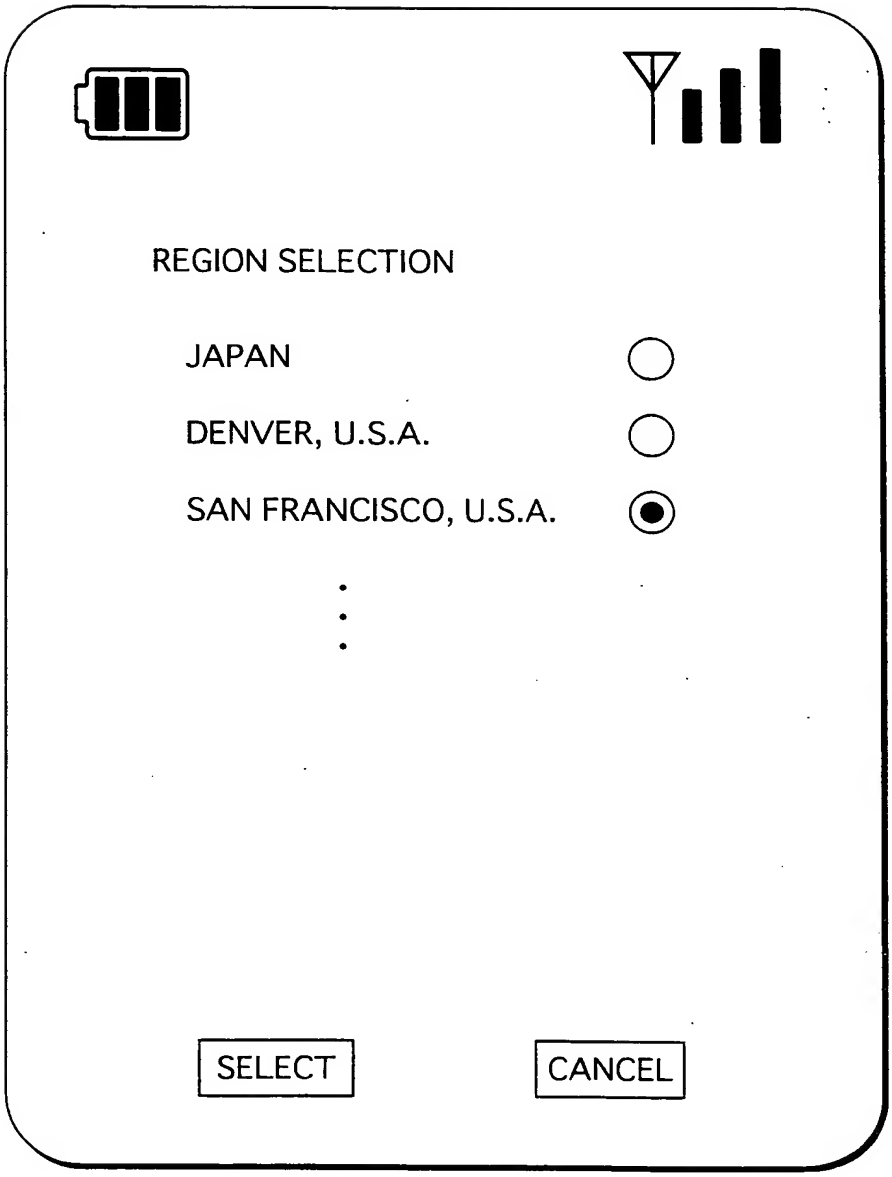

REGION SELECTION
JAPAN
DENVER, U.S.A.
SAN FRANCISCO, U.S.A.
SELECT
CANCEL

FIG.8

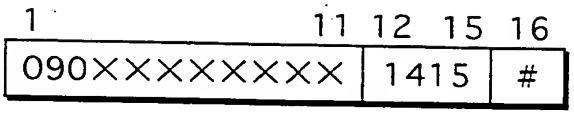


FIG.9

TO: 090ZZZZZZZZ@provider.ne.jp

FROM: 090XXXXXXXX@provider.ne.jp

SUBJECT: LOCALITY NOTIFICATION

TEXT: 090XXXXXXXX

1415

SAN FRANCISCO, U.S.A.

FIG.10

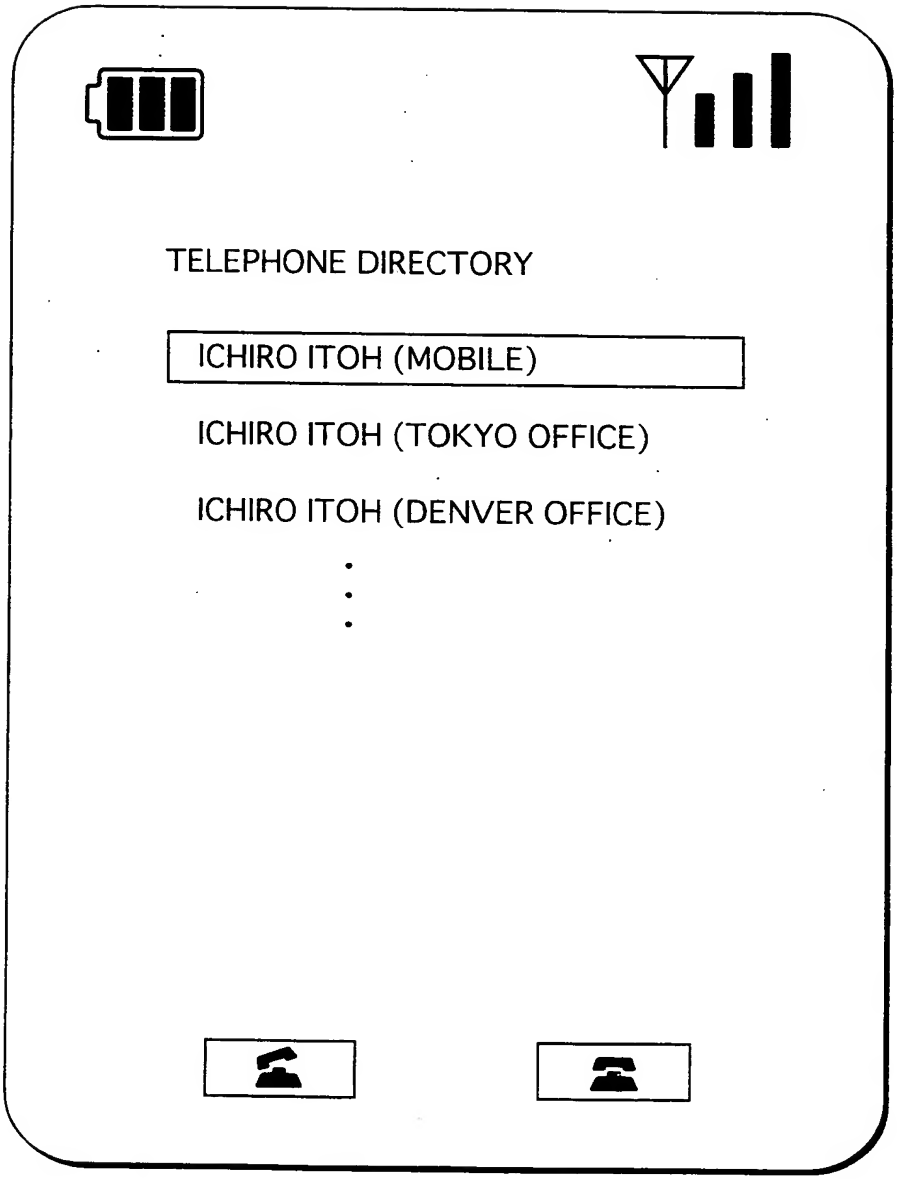

TELEPHONE DIRECTORY
ICHIRO ITOH (MOBILE)
ICHIRO ITOH (TOKYO OFFICE)
ICHIRO ITOH (DENVER OFFICE)

FIG.11

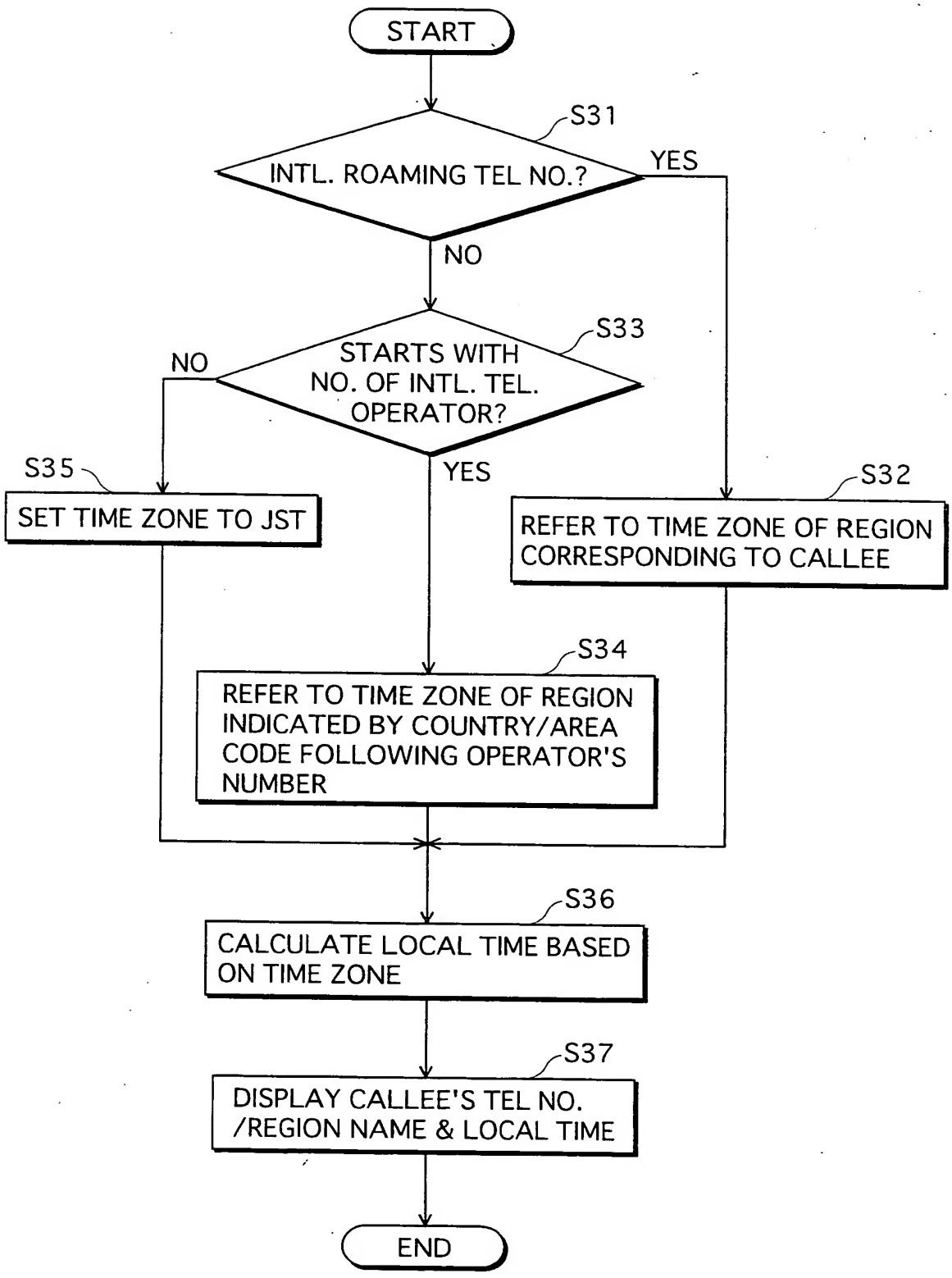

START
S31
INTL. ROAMING TEL NO.?
YES
NO
S33
STARTS WITH NO. OF INTL. TEL. OPERATOR?
NO
YES
S35
SET TIME ZONE TO JST
S32
REFER TO TIME ZONE OF REGION CORRESPONDING TO CALLEE
S34
REFER TO TIME ZONE OF REGION INDICATED BY COUNTRY/AREA CODE FOLLOWING OPERATOR'S NUMBER
S36
CALCULATE LOCAL TIME BASED ON TIME ZONE
S37
DISPLAY CALLEE'S TEL NO. /REGION NAME & LOCAL TIME
END

FIG.12

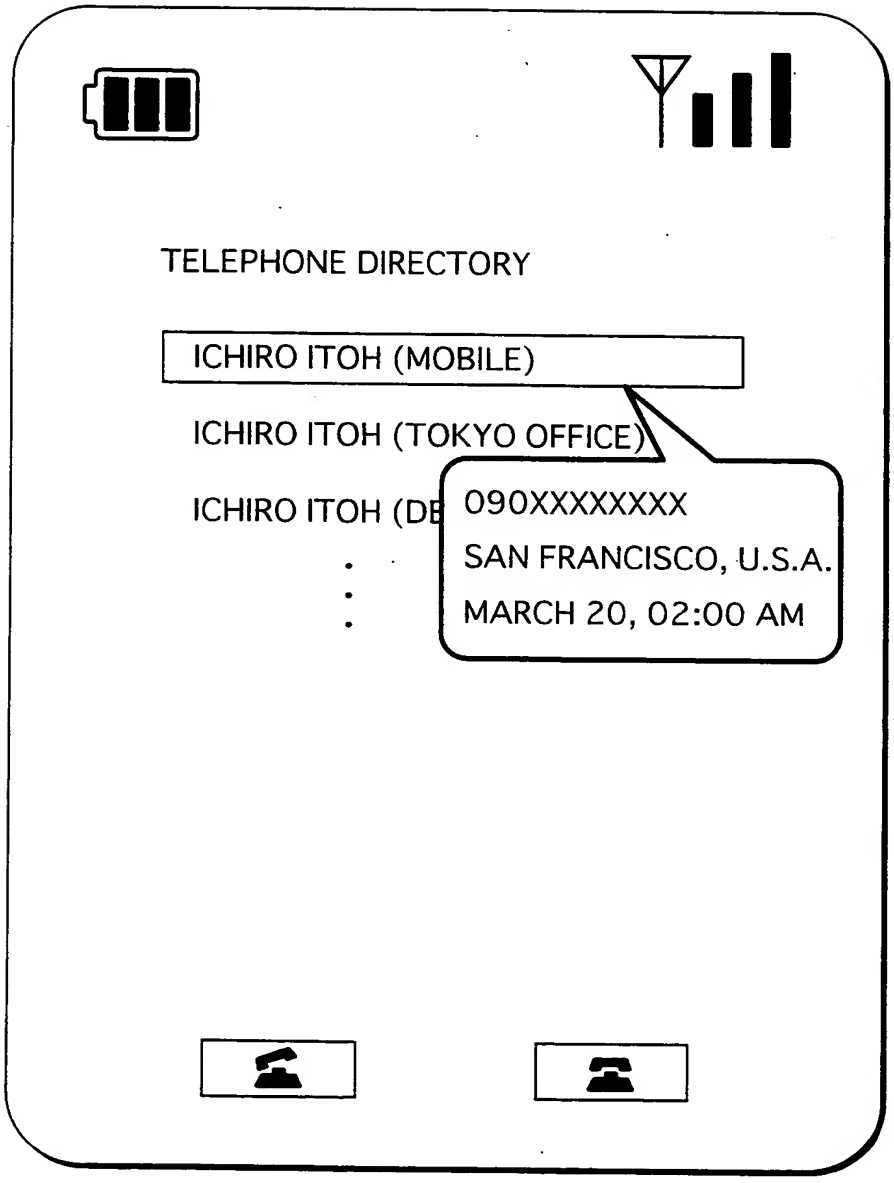

TELEPHONE DIRECTORY
ICHIRO ITOH (MOBILE)
ICHIRO ITOH (TOKYO OFFICE)
ICHIRO ITOH (DE
090XXXXXXXX
SAN FRANCISCO, U.S.A.
MARCH 20, 02:00 AM

FIG.13

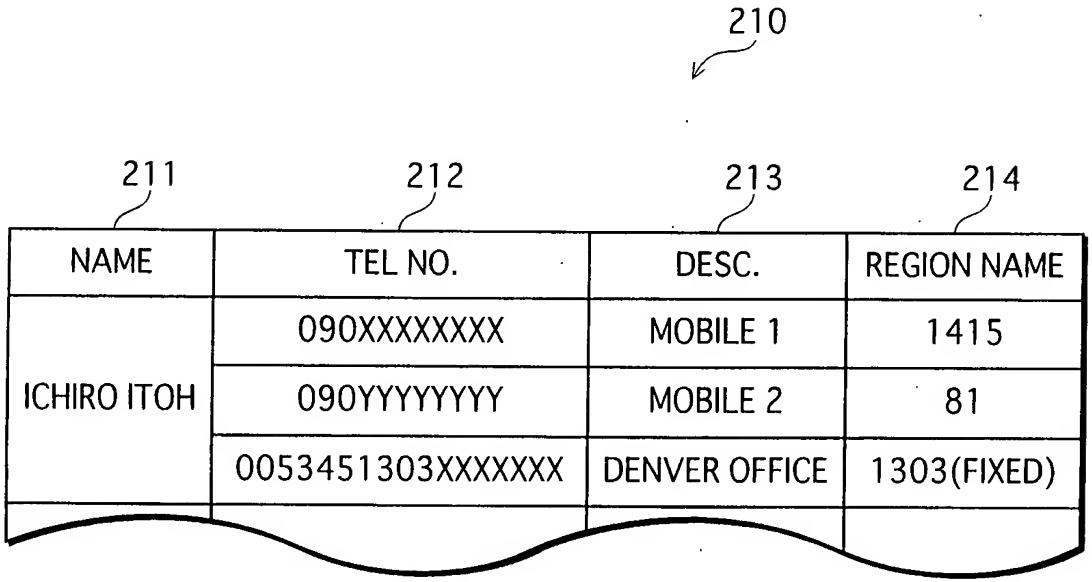

210
211
212
213
214
NAME
TEL NO.
DESC.
REGION NAME
ICHIRO ITOH
090XXXXXXXX
MOBILE 1
1415
090YYYYYYYY
MOBILE 2
81
0053451303XXXXXXX
DENVER OFFICE
1303(FIXED)

FIG.14

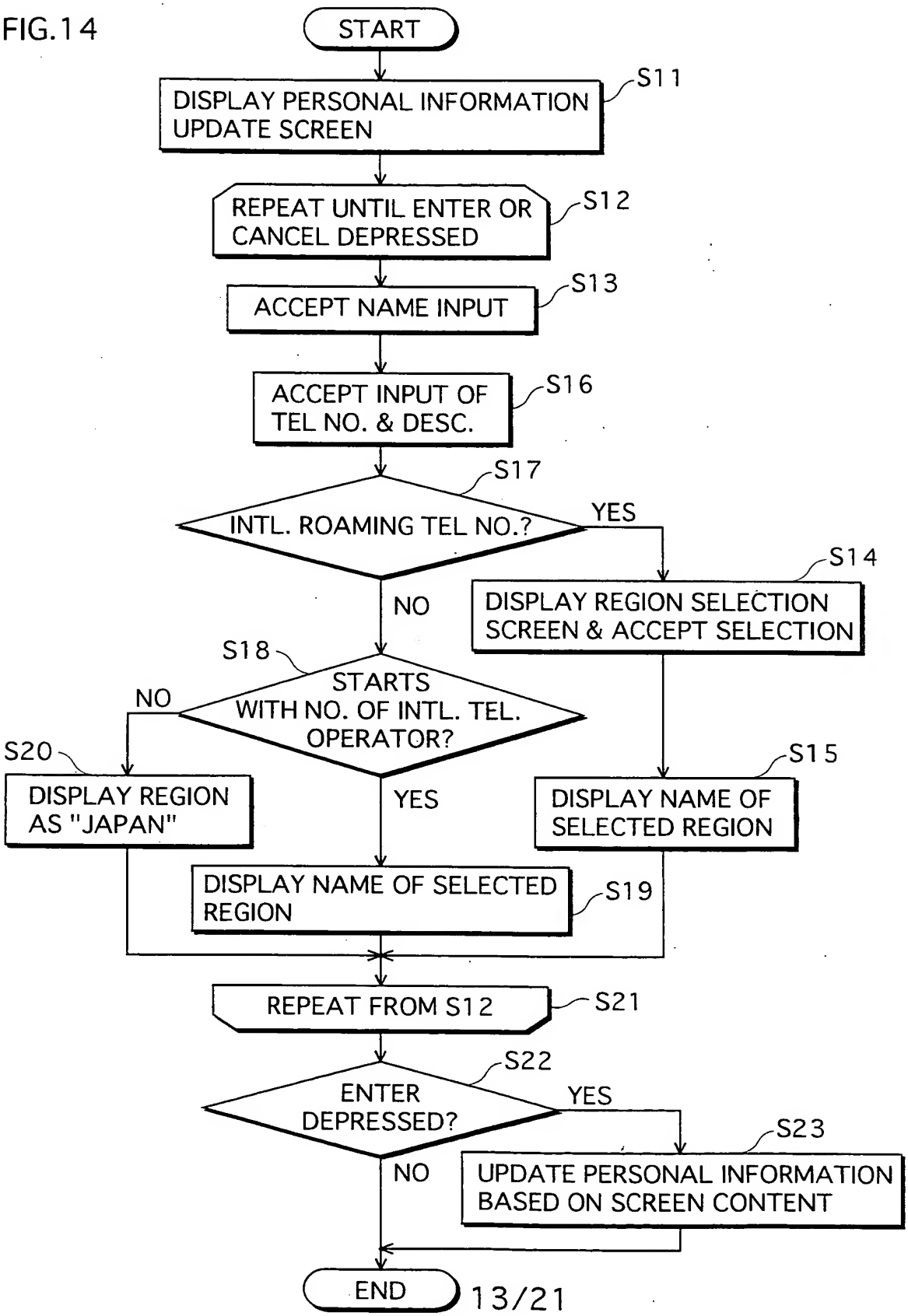

START
DISPLAY PERSONAL INFORMATION UPDATE SCREEN
S11
REPEAT UNTIL ENTER OR CANCEL DEPRESSED
S12
ACCEPT NAME INPUT
S13
ACCEPT INPUT OF TEL NO. & DESC.
S16
S17
INTL. ROAMING TEL NO.?
YES
NO
S14
DISPLAY REGION SELECTION SCREEN & ACCEPT SELECTION
S18
STARTS WITH NO. OF INTL. TEL. OPERATOR?
NO
YES
S20
DISPLAY REGION AS "JAPAN"
S15
DISPLAY NAME OF SELECTED REGION
DISPLAY NAME OF SELECTED REGION
S19
REPEAT FROM S12
S21
S22
ENTER DEPRESSED?
YES
NO
S23
UPDATE PERSONAL INFORMATION BASED ON SCREEN CONTENT
END

FIG.15

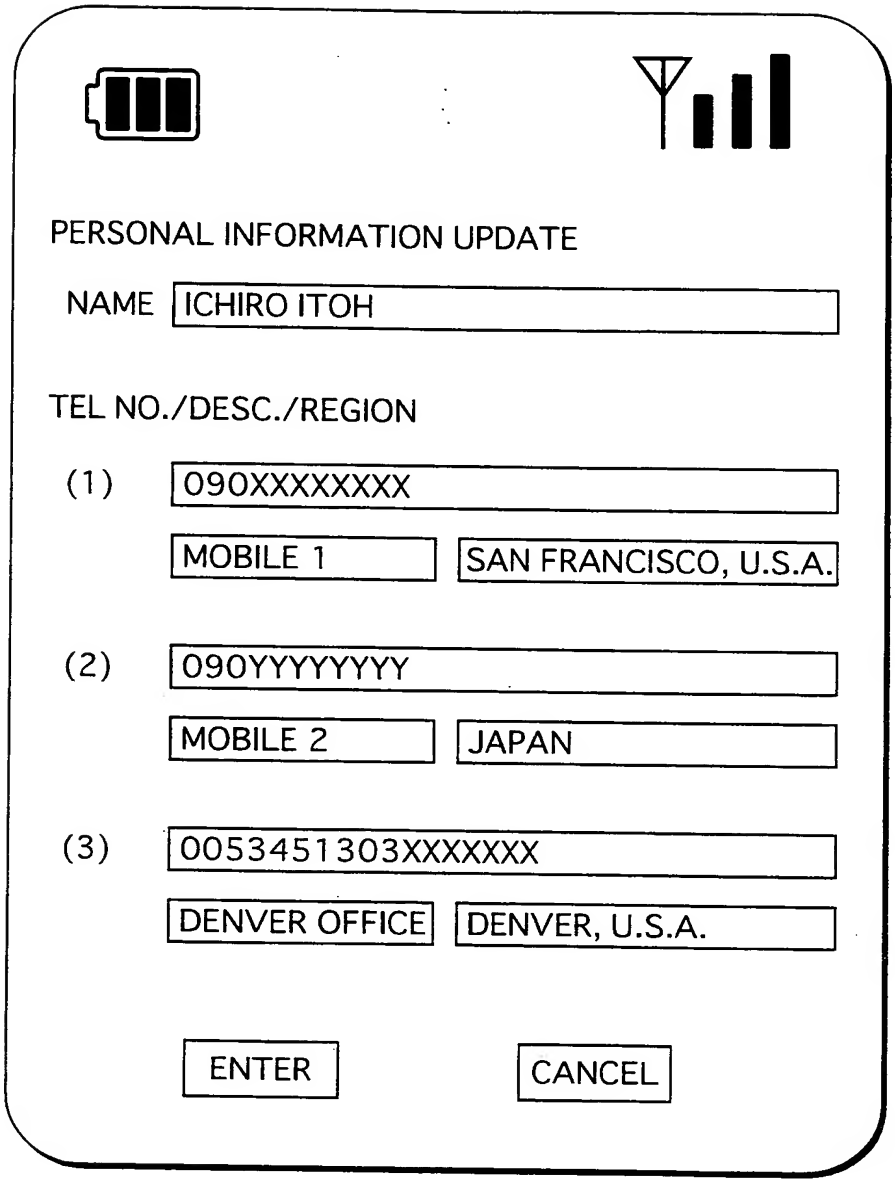

PERSONAL INFORMATION UPDATE
NAME
ICHIRO ITOH
TEL NO./DESC./REGION
(1)
090XXXXXXXX
MOBILE 1
SAN FRANCISCO, U.S.A.
(2)
090YYYYYYYY
MOBILE 2
JAPAN
(3)
0053451303XXXXXXX
DENVER OFFICE
DENVER, U.S.A.
ENTER
CANCEL

FIG.16

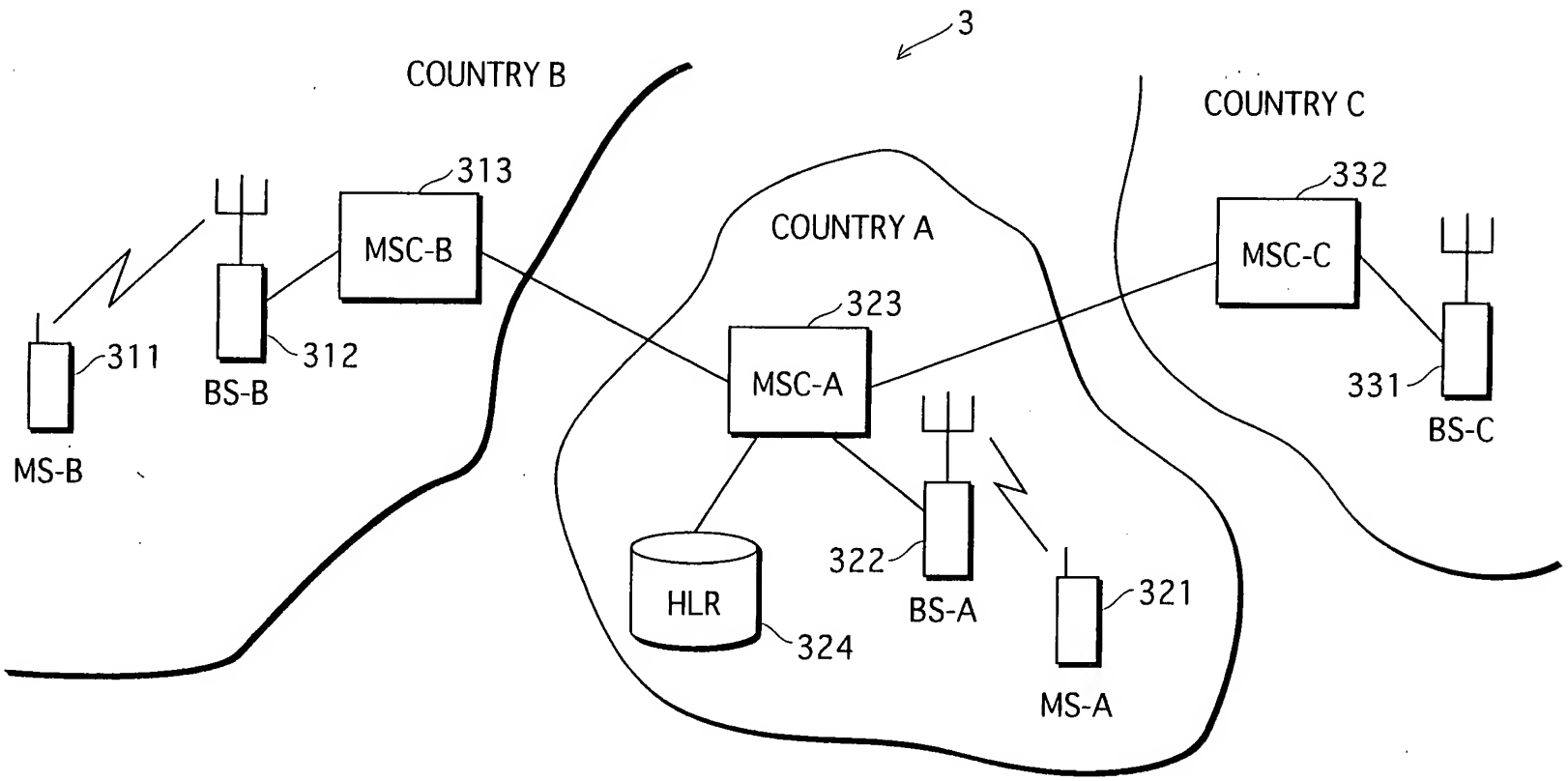

3
COUNTRY B
COUNTRY C
COUNTRY A
313
MSC-B
332
MSC-C
323
MSC-A
311
312
BS-B
MS-B
331
BS-C
322
BS-A
321
HLR
324
MS-A

FIG.17

TEL NO.	TERMINAL ID	LOCATION ID
090XXXXXXXX	$IMSI_1$	LAI_1
090YYYYYYYY	$IMSI_2$	LAI_2

FIG.18

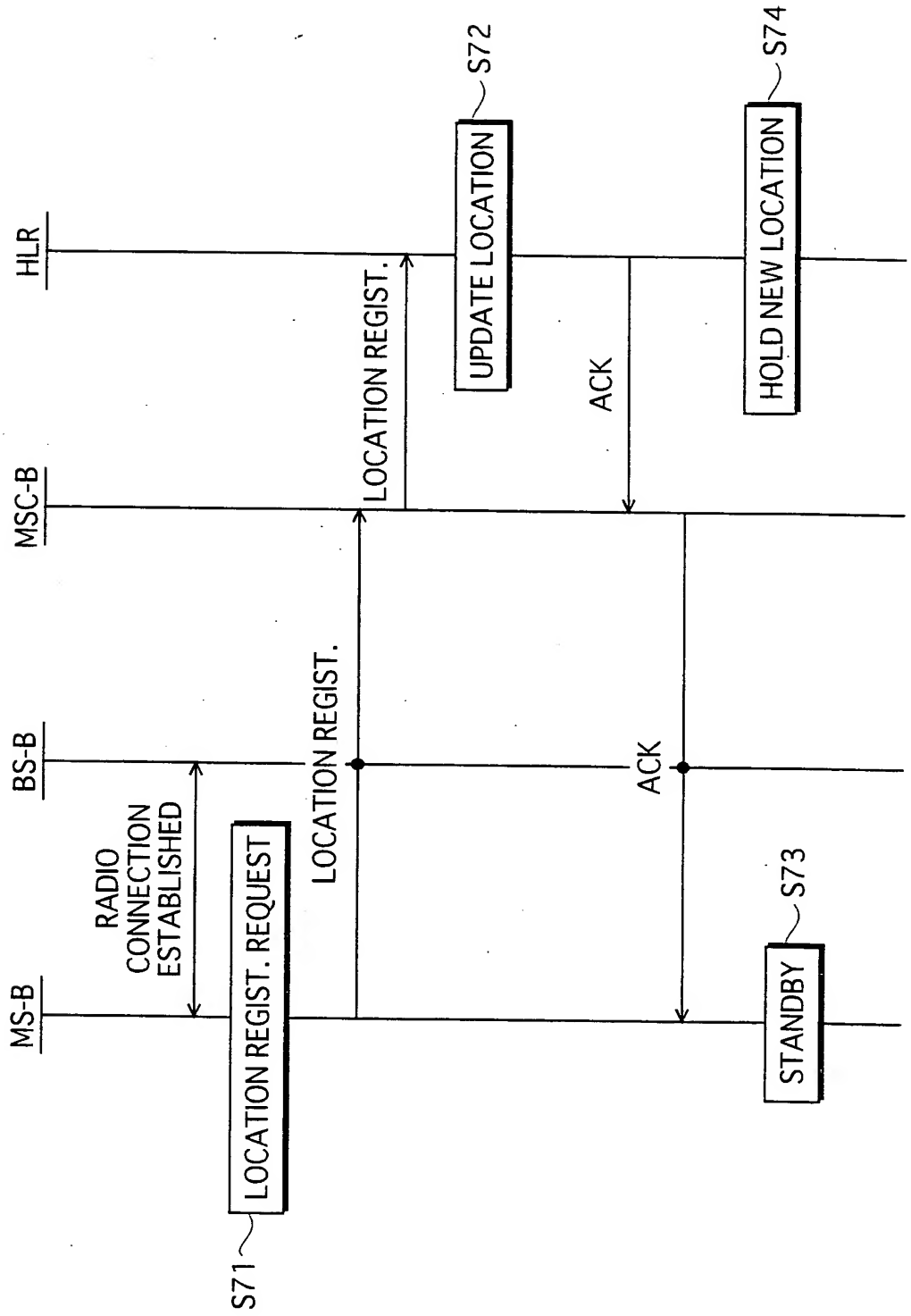

HLR
MSC-B
BS-B
MS-B
LOCATION REGIST.
UPDATE LOCATION
S72
HOLD NEW LOCATION
S74
ACK
LOCATION REGIST.
ACK
RADIO CONNECTION ESTABLISHED
LOCATION REGIST. REQUEST
S71
STANDBY
S73

FIG.19

LOCATION ID	REGION NAME	TIME ZONE
LAI_1	JAPAN	UTC+9
LAI_2	DENVER, U.S.A.	UTC-7
LAI_3	SAN FRANCISCO, U.S.A.	UTC-8

FIG.20

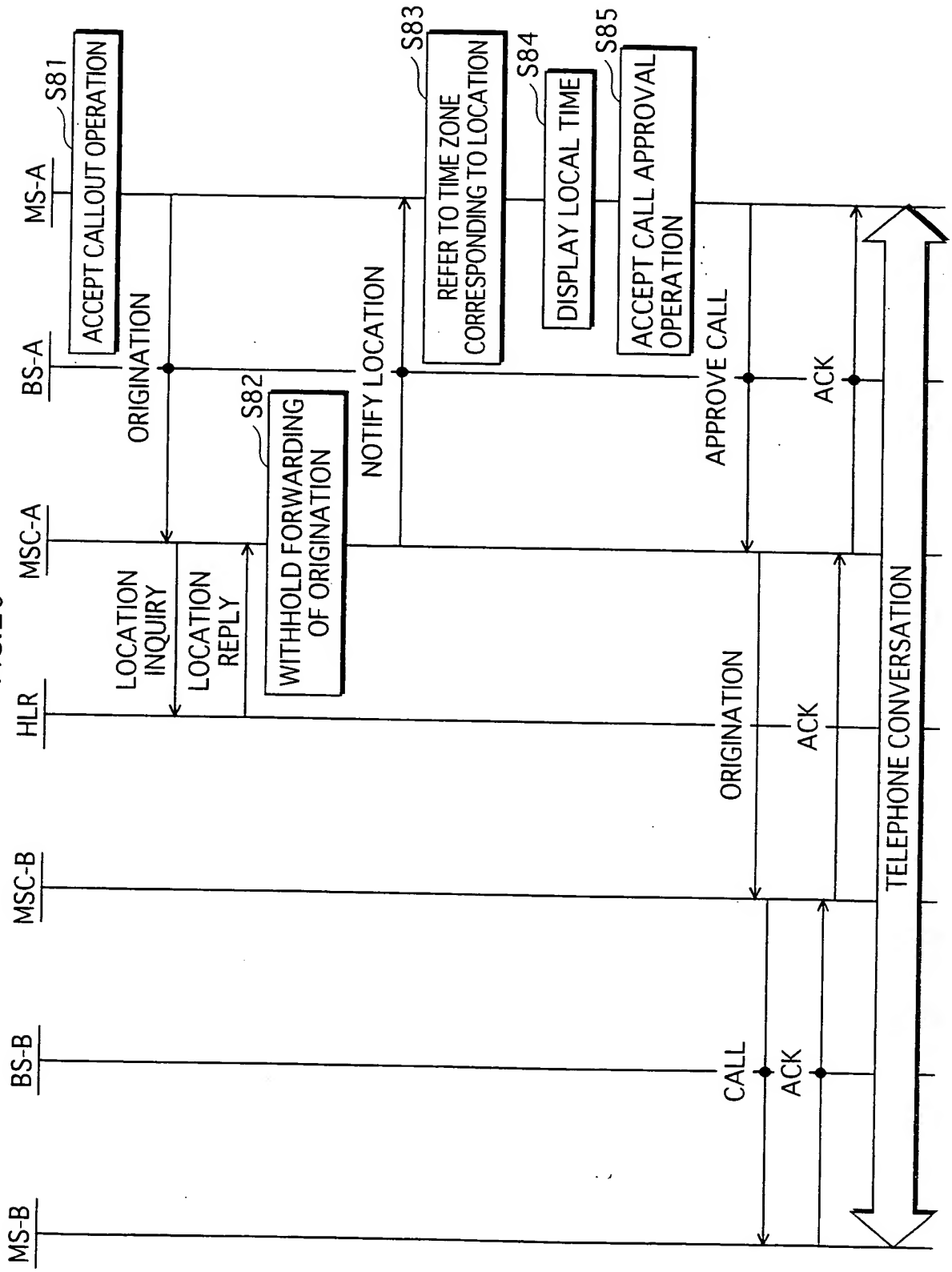

MS-A
BS-A
MSC-A
HLR
MSC-B
BS-B
MS-B
S81
ACCEPT CALLOUT OPERATION
ORIGINATION
LOCATION INQUIRY
LOCATION REPLY
S82
WITHHOLD FORWARDING OF ORIGINATION
NOTIFY LOCATION
S83
REFER TO TIME ZONE CORRESPONDING TO LOCATION
S84
DISPLAY LOCAL TIME
S85
ACCEPT CALL APPROVAL OPERATION
APPROVE CALL
ACK
ORIGINATION
ACK
CALL
ACK
TELEPHONE CONVERSATION

FIG.21

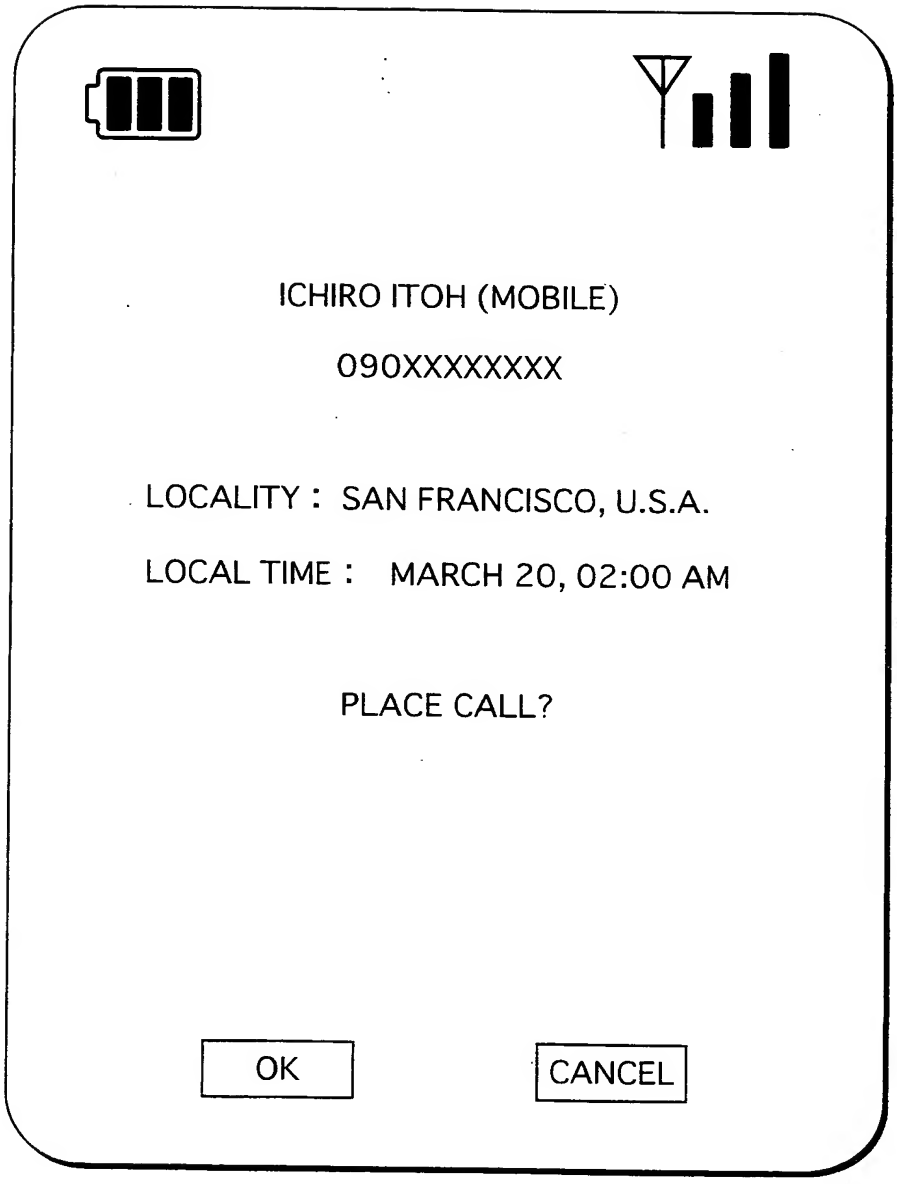
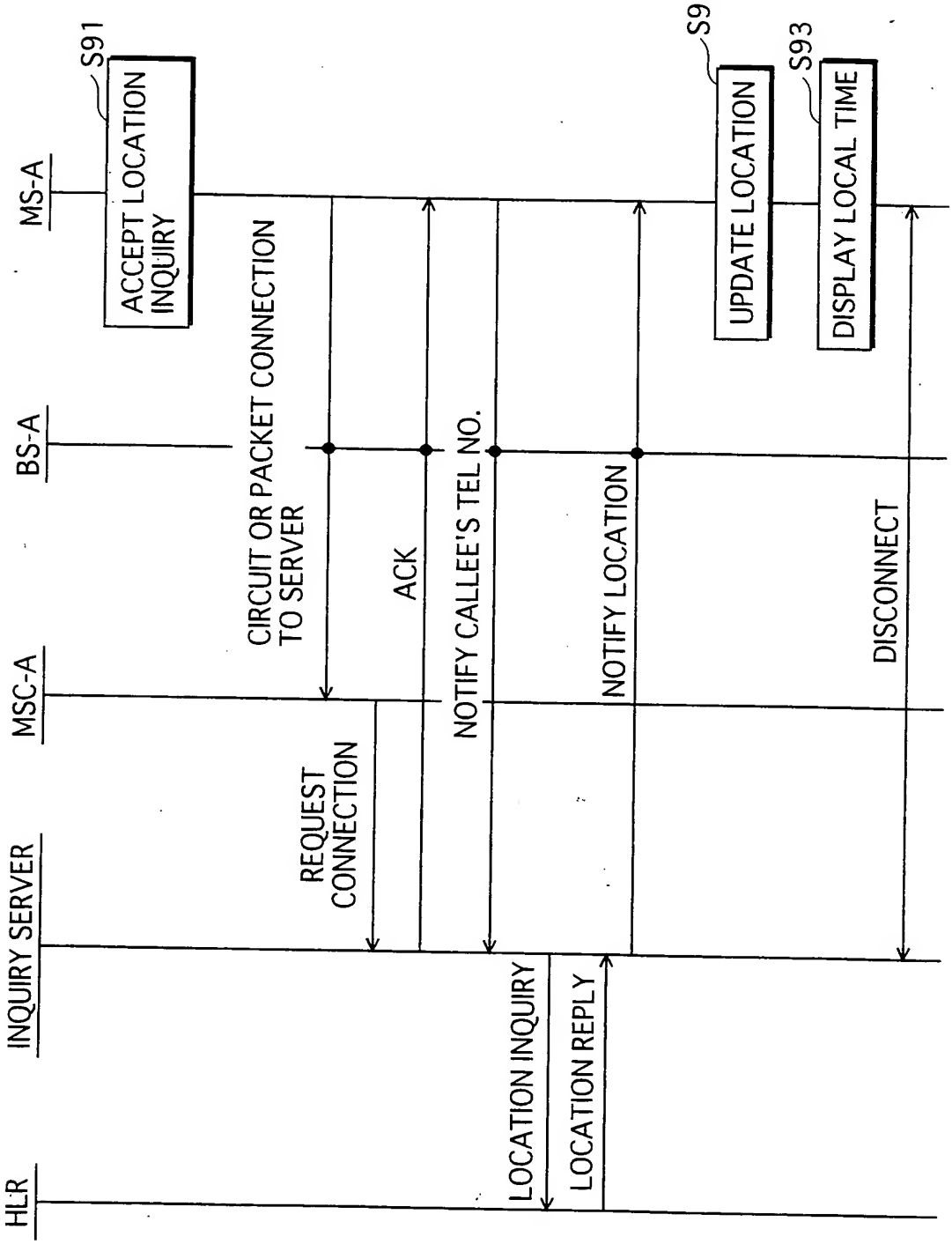

ICHIRO ITOH (MOBILE)
090XXXXXXXX
LOCALITY : SAN FRANCISCO, U.S.A.
LOCAL TIME : MARCH 20, 02:00 AM
PLACE CALL?
OK
CANCEL

FIG.22


MS-A
BS-A
MSC-A
INQUIRY SERVER
HLR
S91
ACCEPT LOCATION INQUIRY
CIRCUIT OR PACKET CONNECTION TO SERVER
ACK
NOTIFY CALLEE'S TEL NO.
NOTIFY LOCATION
DISCONNECT
S92
UPDATE LOCATION
S93
DISPLAY LOCAL TIME
REQUEST CONNECTION
LOCATION INQUIRY
LOCATION REPLY